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ABSTRACT

The growing demand for colleges and universities to be accountable to their publics and the recognition that assessment is of little value without a systematic planning effort have led many institutions to turn to the concept of Total Quality Management (TQM). This pamphlet discusses the process of adapting TQM to a typical community college, a process called Continuous Quality Assurance (CQA), and is divided into six chapters. The first chapter, "Forces for Change in Higher Education," describes the recent calls for accountability and the responses made by higher education to those calls. Chapter 2, "An International Focus on Quality," reviews the TQM theory, its practice in Japan, and emerging trends toward quality in business and industry. "Quality in Higher Education," the third chapter, discusses applications of TQM to higher education and some major differences between business and education, including the absence of profitability in education, increased departmental loyalties in educational institutions, and the lack of a perceived crisis in education. Chapter 4, "Continuous Quality Assurance in a Community College," outlines the philosophical approach behind CQA, while chapter 5, "Assessment and Planning for Continuous Quality Assurance," describes the mechanisms (i.e., databases, alumni follow-up, and effective assessment services) that must be in place to implement CQA. Finally, "Implications of a Quality Focus" highlights the benefits of CQA, including providing evidence of institutional effectiveness, a mechanism for preparing funding proposals, and a vehicle for identifying and setting institutional priorities. (Contains 12 references.) (BCY)

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Continuous Quality Assurance

Adapting TQM for Community Colleges

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Clifford S. Peterson

JC 930 204

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Contents

Foreword iv
Acknowledgements v

Chapter One
Forces for Change in Higher Education 1

Chapter Two
An International Focus on Quality 5

Chapter Three
Quality in Higher Education 12

Chapter Four
Continuous Quality Assurance in a Community College 18

Chapter Five
Assessment and Planning for Continuous Quality Assurance 28

Chapter Six
Implications of a Quality Focus 35

Bibliography 37

About the Author 38

Foreword

In their short history, community colleges have given low priority to both institutional research and long-range planning. This may be related to the fact that in most community colleges student success has been obvious to those within the college, and administrators have been reluctant to spend money to find out what they already know. Programs and services for an ever-increasing number of students have, in most cases, received priority over research and planning.

However, the world outside the college is now demanding that both public and private institutions be accountable to their constituents in terms of meeting goals and objectives. This expectation is currently resulting in well-defined mandates for community colleges on the part of state and federal agencies, accrediting agencies, students, and local communities. Most notable at the present time is a major change in regional accreditation processes, requiring an assessment of stated goals and objectives by colleges and universities seeking reaccreditation.

A related force in public higher education also has implications for assessment and planning. State funding of public colleges and universities has historically been based upon credits generated, resulting in an emphasis upon quantity without regard to quality. However, there is a growing awareness that in order to move beyond counting numbers of students as a basis for the allocation of state and federal funds, procedures must be developed that routinely and systematically assess the extent to which each course, degree program, and service in a college is succeeding in realizing its stated mission.

Recognizing that the assessment of goals and objectives for any organization will result in the identification of areas where change is required, planning becomes a necessary corequisite. Assessment is of little value if it does not lead to systematic and continuous planning for the future. At the same time, planning has been shown to be ineffective when it is not based upon factual information.

With a growing recognition by colleges and universities of these trends, many are turning to the concept of Total Quality Management, which has received widespread acceptance by business and industry in recent years. This work is an effort to apply the author's 35 years of experience in community colleges to the adaptation of TQM to a typical community college—a process called Continuous Quality Assurance, or CQA. I hope it will be helpful to others attempting to maintain the viability of community colleges as a part of the solution to the multifaceted problems facing our society.

Acknowledgements

This work is the product of a deep and abiding interest by everyone connected with Quinsigamond Community College in Worcester, Massachusetts, working together to assure continued access to quality educational experiences that meet the needs of a diverse and vital community. Without the interest, dedication, and support of the trustees, faculty, and staff, such an initiative would not have been possible.

The Board of Trustees is due special thanks for the sabbatical leave that made possible the basic research for this endeavor. The president's cabinet, especially Dean Clement Gainty, who very competently carried on as acting president during that period, made the leave feasible. Without the day-to-day assistance of Patricia Kett, assistant to the president, the work could not have been carried out. Also due special appreciation for her expert assistance is the college's assessment consultant, Ann Maust, president of Research Dimensions, Inc., who helped originate the concept and participated in its development. As "editor-in-chief," my wife Sara was, as she has been for forty-two years, an essential partner in this endeavor.

Chapter One

Forces for Change in Higher Education

During the 1980s a plethora of reports from diverse national organizations focused on the need for colleges and universities to validate the extent to which graduates were meeting institutional and programmatic expectations. This call for accountability came from reports of the American Council on Education in 1982, the National Commission on Excellence in 1983, the National Institute of Education Study Group in 1984, and the Association of American Colleges in 1985. Although these reports and others cited examples of college and university graduates whose communication and critical thinking skills were below those expected of most high school graduates, the recommendations focused on the need for colleges and universities to define clearly what is expected of graduates in each degree program and validate the extent to which graduates meet those expectations. Such reports were actually a call for accountability rather than an exposé of low standards.

Each of these reports received national media coverage as it was issued. Unfortunately, that coverage highlighted the fact that a small number of graduates of all types of institutions are, indeed, academically underprepared. Congress and state legislatures immediately seized the opportunity to propose a variety of "quick-fix" proposals to mandate standards in higher education. Elitists inside and outside higher education were quick to jump on this bandwagon, since, in their view, providing educational opportunity for all citizens obviously requires a lowering of standards. Fiscal conservatives saw it as an excuse to divert funding from public colleges and universities. The media saw it as an opportunity to sensationalize as well as politicize yet another serious national issue.

Almost immediately various federal agencies began to respond to the perceived lack of standards in colleges and universities. Ability to

Benefit regulations limiting the eligibility of students for federal financial aid were a de facto implementation of national standards. Although the Department of Education backed down on immediate implementation when it began to understand the complexity and scope of such regulations, it has not yet abandoned the concept. Even more ominous is the 1991 Report of the National Goals Panel created at the 1989 President and Governors' Summit, which states: "Future goals will seek to include indicators of work force skills and of college students' skills to think critically, communicate effectively, and solve problems." The fact that a panel that included no representatives of higher education would presume to dictate the "indicators" of college skills is certainly cause for concern.

External Forces

Colleges and universities responding to the political realities of the accountability movement are, for the most part, unaware that this movement is an outgrowth of a number of complex forces at work in society. The tendency is to treat it as simply a routine problem, easily solved within the confines of normal operating procedures. In fact, the problem is far more complex. Converging trends that include an increased awareness of international competition, the technology explosion, growing environmental concerns, consumer awareness, increased liability awards by the courts, and taxpayer revolt have combined to mandate fundamental changes in all aspects of society, including higher education.

Stimulated by these multifaceted converging trends, both for-profit and non-profit organizations throughout the world are now placing an emphasis upon quality assurance. This quality revolution in the workplace began with a systematic effort by Japanese industry, following World War II, to change its pre-war image of manufacturing inexpensive but inferior products. As everyone is now aware, the Japanese were spectacularly successful in reversing the image of the quality of their products and with it the profitability of their enterprises. The basis of this remarkable reversal was the concept espoused by their American consultants and known by a number of titles, most generally as Total Quality Management, or TQM.

Forty years later, major inroads upon American products, most notably by Asian automobile and electronics manufacturers, have resulted in the recognition by most Americans that this country is faced with an economic crisis that requires action. Business and industry, hard hit by foreign competition, have increasingly turned to the strategy utilized by Japan—a full commitment to quality through some form of TQM.

Although the attraction of TQM for business and industry comes from the positive relationship now proven to exist between product

quality and profitability, it is also apparent that the basic tenets of this concept are applicable to non-profit organizations. As government, education, health care, social services, and other non-profit organizations are increasingly faced with pressures to be accountable for their effectiveness in utilizing existing resources and developing new sources of revenue, they, too, are turning to TQM as a solution. However, a close examination of the methodology for achieving a commitment to quality in a profit-oriented business makes it apparent that non-profit organizations, such as colleges and universities, are unique in many ways and must develop their own methodology for implementing TQM. Simply attempting to adopt the concept as it is implemented in business and industry will not work. Colleges need a different approach, an approach known as Continuous Quality Assurance, or CQA.

Responses

Recognizing that higher education is different in many ways from business and industry, but cognizant of the political reality of external forces for change, many colleges, universities, and state regulating agencies are attempting to respond to the call for accountability. The most common response is a variety of assessment activities designed to validate quantitatively that the vast majority of graduates are adequately prepared to fulfill the stated expectations of their degree programs. The "assessment fever" thus generated in the early 1990s, although well-conceived in many institutions, unfortunately relied primarily on "off-the-shelf" standardized testing devices that failed to live up to the expectations of either greater accountability or the political mandates. The result has been a renewed effort toward a political solution emphasizing national standards and testing that is certain, if successful, to have a stifling effect upon the effectiveness of colleges and universities.

Another response to the call for accountability has come from the six regional accrediting associations, which are now requiring assessment-based measures of effectiveness as a criterion for accreditation. Although this linkage to institutional effectiveness is an important step forward, the quick-fix mentality continues to prevail in that these accrediting bodies lack a clear framework for defining effectiveness and incorporating it into the accreditation process. The accreditation guidelines, while mandating assessment, offer no indication of how the data thus generated is to be used.

Some colleges and universities appear to be focusing their attention exclusively upon management practices. The Total Quality Management concept is, as we shall see, much more than a management style, and such limited efforts would appear to be little more than a token response. What higher education can learn from business and industry is that quality assurance must be an organizationwide commitment.

Implications

TQM is a systematic effort to use performance data to enhance the quality of an organization and thus appeals to both external and internal forces currently present in higher education. Advocates for standards and testing will find that TQM develops the empirical data base they see as essential. Those calling for accountability will find in that data base a statistical basis for comparing the effectiveness of individual colleges and universities as well as individual degree programs. Educators will welcome the continuously enhanced effectiveness if they are fully involved in defining how it is achieved. With the action shifting from the framework of standards and testing to curriculum, instruction, and services, colleges will see a long-term improvement in their institutional effectiveness.

Chapter Two

An International Focus on Quality

Japanese businessmen and industrialists, encouraged by the extent to which their technological and industrial capacity had challenged that of the United States and the rest of the western world in World War II, were determined to build upon that success by overcoming a pre-war perception of their products as inferior to those of the United States. In their efforts to determine how the United States had combined the efficiency of mass production with superior effectiveness in the war effort, the Japanese launched a systematic study of American industry. In addition to visiting the most progressive American companies and sending their future leaders to be educated in our best colleges and universities, they engaged as consultants several American management theorists. J.M. Juran, W. Edwards Deming, and others became actively involved in the Japanese post-war effort to make their products competitive in the international market, particularly in the United States.

Emerging from the work of these American management theorists was an emphasis upon quality enhancement throughout an organization as the basis for profitability. Although their theories have different labels, the concept has become commonly known by the title coined by A.V. Feigenbaum—Total Quality Management, or TQM. Although a few American companies, such as ITT, began as early as 1950 to adopt some aspects of TQM, it was the Japanese who first recognized the concept as a strategy to solve their economic crisis. It was Japanese companies that first made a total commitment to quality enhancement as their driving force.

TQM Theory

J.M. Juran was a frequent consultant to the Japanese during the post-war years, when they were conceiving and implementing the Japanese quality revolution. While assisting in this transition, Juran observed several facts: change is a continuing phenomenon, quality-focused leadership requires continuous strategic changes, and prevailing strategies

become rapidly out-of-date. Based upon this experience, he developed a clearly defined concept that is not only specific in terms of applications to business, but also, as we shall see, potentially transferable to a nonprofit organization such as a college or university.

Juran's concept of Leadership for Quality evolved from a quality control perspective and, as such, is oriented primarily toward convincing management that quality is achieved through a unified, organizationwide approach as opposed to a single department attempting to repair the mistakes of the rest of the organization. He found the most prevailing obstacles to quality to be differences in viewpoint rooted in varied premises, concepts, and definitions. Thus, Juran's work emphasized techniques for overcoming these differences and achieving a unified approach among all management team members.

Juran's definition of quality as "fitness for use" is one that has obvious implications for all types of organizations. To assure greater understanding of his concept, Juran defined his terms very precisely: product is the output of any process; product features are those intended to meet customer needs; a customer is anyone, external or internal to the organization, who is affected by the product or the process; product satisfaction occurs when product features meet customer needs; deficiencies are product failures resulting in customer dissatisfaction. Each of these definitions will be useful as we analyze how TQM may be adapted to the unique setting of a college or university.

From these definitions, Juran developed the Juran Trilogy of Managing for Quality: planning, control, and improvement. Planning, according to Juran, occurs in five steps:

- Determining who the customers are
- Determining the needs of those customers
- Developing product features that respond to customer needs
- Developing processes capable of systematically producing those product features
- Transferring the resultant plans to operating forces

The last step leads into control, the second part of Juran's trilogy, which consists of evaluating actual performance, comparing that performance to quality goals, and acting upon the deficiencies. Acting upon the deficiencies becomes the third part of the trilogy—improvement is achieved by establishing the structure for quality improvement, identifying needs for improvement as specific projects, establishing project teams with clear responsibility for their own actions and accountability for their successes, and providing the resources and training required for the success of each team. This trilogy could, by itself, provide a working methodology for integrating TQM into an institution and will be critical in adapting TQM for community colleges.

Juran emphasizes the importance of motivating each and every individual in the organization to embrace quality enhancement. Key to motivating for quality, says Juran, is the involvement of all workers in both the planning and execution of change. In so doing, management must avoid surprises and provide individuals with the time to evaluate, understand, and accommodate change. Other Juran maxims for implementing quality include: start small and keep it fluid, create a favorable social climate, weave change into the existing cultural pattern, respond positively to all ideas, create a constructive atmosphere, work with recognized leadership, and treat people with dignity. None of these are new ideas in a collegial setting. What is new, however, is a greater potential for achieving these goals through a focus upon quality.

W. Edwards Deming, a statistician with degrees in mathematics and physics, has been described as a capitalist revolutionary who sold Japan on the concept of quality as the key to profitability. In the early 1950s he began working with Japanese companies, who showed their admiration for him by naming their top quality award the Deming Prize. Deming now works with Ford and General Motors, among other American companies, to implement the concept of TQM in this country, since we are currently in a quandary similar to the Japanese following World War II. American companies are now also responding to this same concept of quality as the key to international competitiveness.

A basic tenet of Deming's philosophy as adopted by the Japanese is that there must be a complete transformation of an organization if maximum efficiency and quality are to be achieved. His Fourteen Points for Management are intended to provide a basis for that transformation and are critical to the TQM concept:

1. Create constancy of purpose toward improvement of product and service....
2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.
3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building in quality in the first place.
4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.
5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership. The aim of supervision should be

to help people... to do a better job....

8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments....
10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.
11.(a) Eliminate work standards (quotas)... Substitute leadership.
11.(b) Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.
12.(a) Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.
12.(b) Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, *inter alia*, abolishment of the annual or merit rating and of management by objective.
13. Institute a vigorous program of education and self-improvement.
14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

(Deming, 1986, pp. 23-24)

Vital to implementing each of these points, according to Deming, is that "a leader, instead of being a judge, will be a colleague, counseling and leading his [or her] people on a day-to-day basis, learning from them and with them" (1986, p. 117). Leadership must change along with every other aspect of the organization if quality is to be enhanced to the fullest.

Peter F. Drucker's early theories were based upon a similar distinction between power and authority. "Management has no power," according to Drucker. "Management has only responsibility. And it needs and must have the authority to discharge its responsibilities—but not one whit more.... Management has authority only as long as it performs" (1973, p. 301). Drucker goes on to state that "a prerogative is a privilege of rank. Management has no claim to any such privilege.... To invoke management prerogatives undermines management authority" (1973, p. 301). Thus, it is essential to empower workers by building responsibility into the work force from the top to the bottom of the organization. Empowerment of individuals within an organization actually strengthens management authority, rather than weakening it, as is often feared.

Drucker's later works emphasize the need for continuous organizational change based upon the assumption that everything that exists is aging. The foundation of innovation is a willingness to eliminate the

obsolete through planning. To accomplish this, Drucker states, innovative efforts must aim high, and individuals cannot be afraid to fail. "Systematic innovation... consists in the purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation" (1985, p. 35). Even public service institutions, says Drucker, need to build into their policies and practices the constant search for innovative opportunity. He specifically includes higher education: "Public service institutions such as universities... and the like need to be entrepreneurial and innovative fully as much as any business" (1985, p. 177).

"Quality is free—what costs money are the unquality things—all the actions that involve not doing jobs right the first time," begins Philip B. Crosby in *Quality is Free: The Art of Making Quality Certain* (1979, p. 1). At ITT in the 1960s Crosby searched for a systematic way of guaranteeing that organizational activities occur as they are planned. In studying ITT and other companies, he found a number of erroneous assumptions preventing consistent quality. These included beliefs that quality is not measurable, that quality is too expensive, that all problems originate with workers, and that quality is exclusively the province of the quality control department. Crosby also discovered that many companies lacked defined standards. To overcome these problems he advocated that quality become the obligation of every individual, and that each person be encouraged to "act now on situations that may cause problems some time from now," or in other words, "act now for reward later" (1979, p. 29).

The president of General Systems Co., Inc., A.V. Feigenbaum, believes that quality is a fundamental way of managing an organization and that "quality leadership is the key to business success in the 1990s" (1991, p. xvii). This belief is based upon the recent growth of a new kind of marketplace in which the rising expectations of consumers, coupled with the changing role of government, have greatly intensified demands on management. He finds that the consumer is increasingly placing a higher emphasis upon quality and expecting acceptable products at *any* price level. Thus, it is quality as well as price that sells products today, but only quality that brings the customer back.

Feigenbaum defines total quality control as "an effective system for integrating the quality-development, quality-maintenance, and quality-improvement efforts of the various groups in an organization so as to enable marketing, engineering, production, and service at the most economical levels which allow for full customer satisfaction" (1991, p. 6). He believes that effective human relations are basic to quality control and lists ten benchmarks of a total quality imperative:

- Quality is a companywide process.
- Quality is what the customer says it is.
- Quality and cost are a sum, not a difference.

- Quality requires both individual and teamwork zealotry.
- Quality is a way of managing.
- Quality and innovation are mutually dependent.
- Quality is an ethic.
- Quality requires continuous improvement.
- Quality is the most effective, least capital-intensive route to productivity.
- Quality is implemented with a total system...

(Feigenbaum, 1991, pp. 828-829).

Emerging Trends in Business and Industry

The blending of these theories resulted in the adoption by the Japanese of four basic management concepts: first, a systematic focus throughout the entire organization upon the needs and desires of the customer; second, continuous analysis of the evolving needs and desires of the customer with a view toward change and improvement in satisfying those needs and desires; third, an open work environment with an atmosphere that encourages innovation and assists all workers in doing their jobs effectively and efficiently; and finally, long-term thinking with decisions based upon reliable data.

Utilizing the diverse sources of information obtained from the western world and the United States in particular, the Japanese rapidly developed a set of strategies for the quality revolution they so desperately needed. According to Juran (1989), these strategies included: upper management personally taking charge of the quality revolution, all functions and all levels of the organization participating in quality awareness training, rapid quality improvement throughout the organization, and involvement of the entire work force.

Concurrent with the quality revolution in Japan, a number of trends in the United States converged to bring product quality to a position of increased importance in the minds of consumers. Environmental concerns forced consumers to be conscious of product factors other than price. Increased liability awards by the courts forced manufacturers to be aware of product performance. An increased awareness of international competition forced American manufacturers to evaluate the quality of their products in order to remain competitive.

The typical response by most American companies was simply an increased emphasis upon traditional quality control methods. High-level quality control committees were often added but succeeded in doing little more than providing a check on quality that continued to require post-manufacturing corrections rather than improvement of the manufacturing process itself. In only a few American companies was TQM embraced to the extent that quality became a unifying force governing all processes. Quality remained a function rather than a philosophy for most American companies.

However, in recent years, the United States trade deficit with Japan has, in the minds of many Americans, reached crisis proportions. The Japanese "takeover" of a major share of the automotive and communications markets has completely reversed the economic circumstances that followed World War II—American products are now widely perceived as inferior and Japanese products viewed as higher in quality and value. Recognizing this phenomenon, a quality revolution similar to that which has been so successful in Japan has emerged in the United States. Evidence of this is to be found in the advertising posture adopted by two major United States automotive manufacturers—"Quality is Job One" and "Putting Quality on the Road." Similar messages now dominate the marketing strategy for most American companies in all manufacturing industries.

There are examples, throughout the country, of companies that recognize the crisis and have begun to adopt the TQM concept. In addition to giant corporations like ITT, Ford, and General Motors, which also utilized the consultant services of Deming, there are hundreds of smaller companies that have used consultants such as Crosby to successfully implement TQM. FLEXcon Co., with the consulting assistance of Crosby, began to implement the concept in 1986 and now credits it with the company's profitability through the recession of the early 1990s. Today, employees have been taught to understand the product, its design limitations, and their performance expectations as well as every other worker's contribution to the end product. In many instances, employee improvement now gives individuals the power to stop production to improve the process. Empowerment of all workers, however, is one aspect of implementation in which colleges and universities are far ahead of business and industry.

Chapter Three

Quality in Higher Education

TQM has emerged as the dominant business strategy of the 1990s, and there are significant indicators that it is making a difference. Department of Labor statistics indicate that United States manufacturing productivity has increased by one-third since 1979, and, without question, the emphasis upon quality is the single most important reason. With this has come a public expectation that the nonprofit sector will follow suit. The implication for higher education is clear: to continue to be effective, each college and university must develop a continuous, systematic effort to enhance its effectiveness.

Higher Education as an Investment

Higher education has long projected an image of the college degree as an investment in the future. In recent years this concept has been used not only to recruit new students, but also to convince funding sources, both public and private, that providing dollars for institutions of higher learning is an good investment. However, with the growing acceptance of this concept has come a shift in the image of higher education, from a public service to a business transaction—with the expectation of a return on the investment. The accountability movement reflected in the national commission reports of the 1980s and federal and state proposals for uniform standards in the 1990s are a manifestation of that perception. To respond adequately, higher education must view these calls for accountability for what they really are—a method of assuring a return on an investment.

An important implication of the investment concept lies in the area of fund raising from private sources. Long considered primarily the purview of private institutions and a few prestigious public universities, fund raising is now critical for all higher education institutions, including community colleges. State institutions can never again expect to receive as much of their funding from tax sources as in the past and must now convince private funding sources that higher education is a worth-

while investment. This is especially true for community colleges, whose fund raising targets local businesses and industries, which must justify their contributions in terms of what the college can do for them. Fortunately, the concept of education as an investment is one that has become clearer to companies that have adopted TQM, providing community colleges with an opportunity to show exactly what benefits have occurred as the result of an investment. Higher education must view these converging trends both as a mandate to document the benefits of funding and as an opportunity to increase the effectiveness of each institution. The basic tenets of TQM theory respond to the call for accountability and provide a methodology for enhancing institutional effectiveness.

However, although the concept of TQM appears to be very promising for higher education, the methodology in use to assure the bottom-line of product profitability requires careful adaptation to a collegial environment and mission. Continuous quality improvement is the goal in both cases, but basic differences must be carefully considered if TQM is to be more than another management fad.

Applications of TQM to Higher Education

In 1990 Peter Ewell prepared a report for the Education Commission of the States called *Assessment and the New Accountability*. As the title indicates, Ewell links assessment in higher education to the accountability movement in society as a whole. However, he sees a dichotomy between assessment, which is oriented toward "academic improvement," and accountability, which is driven by external mandates. However, if properly developed, improved quality will result in enhanced accountability. Ewell sees the "new accountability" in higher education as being critical to budget expansion and resource development as well as providing concrete evidence of effectiveness (1990, p. 1).

Ewell points out that colleges and universities might profit from accountability by re-establishing credibility, expanding their base of resources, creating a vision for the future, re-creating standards of student competence, sending a clear message on priorities, and revitalizing curriculum and instructional priorities. Even more significantly, Ewell goes on to link assessment to quality enhancement: "Assessment is increasingly viewed as a mechanism for actively shaping institutional agendas toward greater attention to instructional quality.... Assessment cannot do the job alone. Rather, it must work within a carefully crafted approach to systematic improvement" (1990, pp. 6, 21). A "carefully crafted approach to systematic improvement" would appear to be most appropriate to a higher education setting.

Ewell further develops the linkage between assessment and decision making, an important tenet of TQM, in pointing out that assessment may be used to identify problems, set a context for decisions, induce

action, and legitimize a decision. He identifies the barriers to effective use of information in a college or university as shifting goals, communication gaps, interdepartmental competition, a lack of technical skills and resources, technology apprehension, and rejection by individuals or units. Thus, it is clear that the collegial environment is unique and that strategies for the successful implementation of TQM must take these and other factors into account.

"Accountability is back, more strongly than at any time since assessment's inception," according to Ewell (1991, p.12). He notes that "neither states nor institutions feel they can afford assessment as a stand-alone activity" and warns that "as the federal government ponderously enters the assessment arena, it seems destined to repeat, at considerable cost, the rocky history of state assessment initiatives" (1991, p. 12). The lessons of the state experience being ignored at the federal level are that effective assessment "requires clear purposes" and a "long-term commitment," and that information for its own sake is not enough—it must be connected to improvement (1991, p. 16-17). Clearly, unless higher education develops a viable system of accountability, it will have a political solution that not only intrudes upon institutional autonomy, but accomplishes very little and costs a lot.

In *Assessment for Excellence*, Alexander Astin provides a methodology for understanding assessment and links it to institutional effectiveness. In doing so he criticizes the traditional view that excellence in higher education is represented by extraordinary resources such as endowments, library collections, and facilities. Rather, he states, "Excellence is determined by our ability to develop the talents of our students and faculty to the fullest extent possible" (1991, p. 6). Astin goes on to point out that the principal way in which assessment enlightens educators is by providing assistance in decision making—i.e., what to teach, how to teach it, who to admit, how to assist, and how to evaluate. Thus, the responsibility for decision making is extended from management to every educator, including faculty and professional staff.

Lawrence A. Sherr and Delorde J. Tector (1991) discuss TQM in a community college setting in terms of what they perceive to be the needs of the 1990s: the need to control costs, the call for accountability, the need to capture the quality niche, and the need for increased participation in decision making. They note that longitudinal tracking emerges as an acceptable practice after faculty are involved in setting goals. Sherr and Tector further suggest that we cannot treat the instructional process simply as an assigned condition in a stable design. They also suggest that instructional outcome measures are only the beginning of a process that requires information as to how and where learning takes place.

According to John Losak (1986), community colleges have recently begun to redefine the institutional research function to cover not only the broad, nationwide community college mission, but also the individual college mission tailored to the needs of the local community. Losak

emphasizes student outcomes as a means of focusing mission: such a focus allows colleges to link institutional effectiveness to assessment using criteria established in part by faculty. This linkage exemplifies both TQM theory and Continuous Quality Assurance—the application of TQM to the community college mission.

Daniel Seymour points out that assessment practices commonly used by colleges and universities and advocated nationally by Congress are doomed to failure: "In the higher education context, we must recognize that quality is not a by-product of external tests or standards; quality is a healthy intra-institutional state of mind" (1991, p. 2). To this end, he states, "Current assessment procedures need to be subsumed within a larger category, an ever-widening circle that has a larger institutional concept. In the end, quality in higher education has only one meaning—a vision of what the campus community can be at its very best" (1991, p. 10). Our task as community college educators is not only to develop a vision, but also to make sure that vision is based upon constantly changing student and community needs and commit ourselves to change in everything that we do to assure the most effective implementation possible.

Differences from Business and Industry

Sherr and Tector (1991) state that there are important differences between business and higher education that make it necessary to carefully adapt any business management concept to a collegial setting. However, they continue, it appears that many colleges and universities are attempting simply to implement business strategies without regard to differences in the goals, history, and barriers that exist in such organizations.

The most obvious of these differences is the bottom-line goal of profitability in business as opposed to the mission of higher education as an investment in human resources. Although the perception of higher education funding as an investment is similar to the research and development sector of business and industry, the fact remains that business's investment must be justified by future profits while the justification of an investment in higher education is much more complex. The TQM theorists, Deming in particular, emphasize a need to base all decision making upon hard data as to product quality—an entirely different task when the product is human development. Without carefully derived analyses of both long-term student outcomes and the short-term means of achieving those outcomes, quality enhancement cannot occur at a college on the same basis as the statistical quality control used for TQM. To assure fulfillment of the community college mission, it is essential that college services of all types, as well as curriculum and instruction, be continuously assessed and enhanced.

The fact that most faculty and professional staff have traditionally been involved in defining how the institutional mission is achieved also

represents a significant difference from business and industry. At most colleges and universities, there is not only an expectation of involvement (which represents a radical departure for businesses implementing TQM), but also firmly entrenched systems for involvement. Institutions that have a history of effective faculty and staff involvement will enjoy an advantage, while in others the college's history may make meaningful involvement even more difficult to achieve than in an environment where it never existed, such as the private sector. Every college or university must develop an individual strategy for commitment from each person and department within the institution.

Individual commitment on the part of every member of the organization, a key ingredient of TQM, pinpoints another difference between education and business, and a potential barrier for higher education—the rewards available for product quality. In business, where profitability follows quality, that profitability makes monetary rewards possible for all employees. In a nonprofit enterprise the rewards often must be in other forms, such as peer recognition, public respect, moral sense, and job security. The reward options vary with the type of institution and source of institutional funding, thus requiring different strategies for each.

Ewell (1990) lists departmental loyalties as one of the barriers to TQM implementation in business and industry, and notes that it is much more widespread in higher education than in business. Faculty are not only oriented toward their particular work unit, but also toward an entrenched discipline. Both tend to work against the total organizational teamwork concept vital to TQM and will be much more difficult to overcome than the simple departmental competitiveness found in business and industry.

The inherent conservatism of higher education is also a barrier to implementing TQM in most colleges or universities. For the most part managers, faculty, and staff have found little need to revise administrative, instructional, or student service practices from one decade to the next. Even community colleges, known as a segment of higher education that is innovative and responsive to community needs, have changed very little in the last twenty years. The success and popularity of higher education has contributed to this conservatism: people are reluctant to change something that has worked well in the past.

Despite certain controversies, mainly surrounding research universities and four-year institutions, higher education in this country is considered by many the best in the world. Unlike its counterparts in elementary and secondary education, higher education continues, for the most part, to be viewed positively. Although the call for accountability on the part of higher education is misinterpreted by some observers, even they stop short of assigning crisis proportions to the problem. On the contrary, a number of trends indicate that higher education in this country is effective and respected. Applications and enrollments are at an all-time high in virtually every college and university despite escalat-

ing tuition and fees. The gap in workplace opportunities and earnings between college graduates and those with only a high school diploma widens each year. Increasing numbers of foreign students from every country in the world who select American institutions validate the international reputation of American colleges and universities. Unfortunately, higher education may have become a victim of its own success.

The most basic difference between business and higher education, at this time, is the lack of a crisis. The lack of a perceived crisis of the magnitude that spawned quality revolutions in business and industry will make it difficult to obtain a commitment to quality enhancement as a primary focus in most colleges and universities. The complacency that accompanies perceived success is, however, not in accord with the tone of our times. Higher education must consider the call for accountability an indicator that "business as usual" is no longer acceptable in any aspect of our society; it must devise strategies for keeping pace. Changing social and economic forces make it essential that each institution be prepared to accept continuous and systematic change.

A Higher Education Strategy

Although there are significant differences between higher education and business and industry, there are many more similarities than differences. Juran's Trilogy, Deming's Fourteen Points of Management, and Feigenbaum's Ten Benchmarks of Quality are all readily applicable to a collegiate environment. Especially relevant to higher education is the emphasis by all TQM theorists on human relations within the organization and the empowerment of all individuals in the organization to do their job in the best way possible. Feigenbaum's belief that "quality and cost are a sum, not a difference" (1991, p. 828) also has important and timely implications for higher education.

The promise of TQM for higher education goes far beyond that of simply a management style, as the term would seem to indicate. Management style is a key ingredient of TQM, but only as a means of achieving quality. All the ingredients of TQM are equally important to a college or university. However, each institution must develop its own plan for implementing the concept to fulfill its own carefully defined mission. Such a plan must be based upon a complete understanding of all aspects of TQM by every individual in the college. Collegewide involvement in the determination of the aspects of TQM that are appropriate to the college's unique circumstances is essential to an institutionwide focus upon quality.

Chapter Four

Continuous Quality Assurance in a Community College

Continuous Quality Assurance (CQA) is the model that emerges when the TQM concept is adapted to the unique circumstances of a typical community college environment. This terminology conveys that CQA is more than a management style; it is a philosophical approach to all aspects of an organization that is as applicable to a college as to business and industry. Viewed as a strategic plan for enhanced institutional effectiveness, CQA also conveys the realization that regardless of the effectiveness of the existing programs of a college, they require continuous modification to keep pace with the changing needs of the local community.

The President as Chief Quality Officer

The experience of those businesses and industries that have been most successful in achieving profitability through TQM demonstrate the necessity for the CEO to assume the role of chief quality officer. This is apparent in the advertising strategy of large corporations and small businesses alike, where the joint title of "chief quality officer and president" has often been adopted. This dual role is, however, one that the CEO must actually assume on a day-to-day operating level if it is to be effective.

This dual role will also require a major revision of the traditional administrative organizational structure. For a president to be viewed as the chief quality officer, the primary responsibility for both day-to-day operations and development will have to be delegated. However, that delegation must include an acceptance of the fact that CQA activities, particularly the *issue approach* discussed in Chapter Five, will lead to the direct involvement of the president in many aspects of internal and external affairs. A non-territorial team relationship is essential to such a combination of responsibilities and can be achieved if it is based upon total acceptance of CQA by the administrative staff. Success in implementing such a working relationship will require an acceptance of the team approach to management and leadership by every member of the president's immediate staff—especially operational deans and vice presidents.

A Consistent Purpose

The importance of a consistent purpose to organizational effectiveness was identified by Deming (1986). He states that there must not only be such a consistency throughout the organization, but that it must be directed toward innovation and long-term planning if quality is to be achieved.

In a collegial setting, the institutional mission statement can be the basis for achieving a consistency of purpose. However, such a statement must be a good deal more inclusive than those traditionally published by most colleges and universities. To communicate a sense of institutional direction internally as well as externally, the mission statement for a community college must:

- Define institutional goals and priorities
- Be consistent with state system goals
- Respond to national, state, and local educational needs
- Be flexible enough to conform with a rapidly changing environment
- Commit to quality and innovation in all aspects of the endeavor
- Be clear and concise
- Communicate a sense of institutional priorities

As important as the content of the mission statement is, the process by which it is developed is equally important. If that process is to achieve a consistent institutional purpose, all segments of the college community must be involved in reviewing and revising the existing mission statement. After adoption, the contents of the mission statement must be communicated to the college community, the college must systematically and regularly assess the extent to which the mission's goals are being achieved, and the college must periodically revise the mission statement.

The comprehensive review and updating of the mission statement should begin with the appointment, by the president, of a "blue-ribbon" Mission Task Force composed of faculty, staff, students, alumni, and the community at large. The task force should be carefully selected not only for diversity, but also for the credibility of the individual representatives. The charge by the president to the task force should make it clear that the mission statement is, in fact, a statement of desired institutional outcomes that forms the top of a pyramid of consistent outcome statements at all levels of the organization. It forms the basis for decisions regarding budget, course and program review, development, and all other activities of the college. All college publications, manuals, and orientation materials should communicate this purpose.

Continuous and systematic assessment of effectiveness in fulfilling the outcomes included in the mission statement is essential to CQA. As a statement of institutional outcomes, assessment will validate institutional effectiveness and form the basis for effecting changes essential to the long-term viability of the college. Here, again, involvement of the entire college community is essential to credibility.

Leadership Philosophy

Deming (1986) points out that it is critical that leaders adopt a philosophy of helping people do a better job as opposed to the traditional role of supervising their performance. Although this concept has long been espoused in higher education, most of those in leadership positions are not only entrenched in a supervisory mentality, but are actually required to do so by personnel practices and collective bargaining agreements.

Focusing on quality must, of necessity, be accompanied by a significant commitment on the part of individuals at all levels of leadership. Key to accomplishing such a philosophical change is a thorough and complete understanding of TQM and Continuous Quality Assurance.

Institutional acceptance of TQM and CQA begins with the president. To be perceived as the chief quality officer, the president must become personally knowledgeable about all aspects of TQM and CQA. All too often busy college presidents limit their research to limited aspects of TQM and fail to understand the relationship between what they are studying and the concept as a whole. However, the total concept cannot successfully be transferred to a collegiate setting. A president considering the implementation of TQM must, therefore, develop a vision that is consistent with the unique circumstances and history of his or her institution. To synthesize this vision into a format that can be communicated to the college community effectively, the president should prepare a document outlining both the rationale for such an institutional plan and the fundamental proposals for implementation.

Following collegewide dissemination of the CQA document, the president should discuss it with all segments of the college community.

The initial discussions could include a board of trustees retreat; a series of general CQA seminars open to all faculty and staff; a general CQA seminar for the president's staff only; a series of CQA seminars focused on one aspect of the concept, open to faculty and staff who have participated in a general seminar; and meetings to develop a consensus among the president's staff on the meaning of empowerment, leadership philosophy, and position descriptions. The focused seminars and all other forms of discussion that follow the general seminar should reflect the interest of the participants as expressed in the general seminars. Concurrently, the president should encourage individual discussions with interested faculty and staff as well as invite their written reactions and suggestions.

Leaders might also consider revising the annual performance review process for faculty and staff. To be consistent with a team work-group focus, all evaluations should be of the team rather than its individual members. If the work area in question is unionized, change may require contractual revisions, and the president should initiate joint meetings of his staff with the appropriate collective bargaining unit leadership to develop joint proposals for any contract revisions reflecting the CQA concept. Regardless of whether or not there is a collective bargaining unit involved, all involved parties should be allowed input before any individual's working conditions are changed.

Student and Community Needs

Juran's emphasis on determining who the customers are and what their needs are (1989) may at first seem foreign to the community college environment. However, although the term "customer" does not adequately describe the clientele of a college or university, Juran's definition of a customer as "anyone internal or external to the organization" is readily applicable to higher education. Therefore, quality assurance in a community college requires a determination of the educational needs of students, alumni, faculty, staff, and the community as a whole.

The assessment office should be charged with assuring that all assessment projects include a needs identification component. Identifying the needs of students and the local community will help the college analyze and evaluate its current programs. However, identification of community needs not being addressed by the college requires a separate assessment project involving a cross-section of the community. This data should be compiled and analyzed annually with a report made to the president for appropriate distribution.

Innovation and Change

Juran's exhortation to develop product features that meet customer needs and constantly evaluate and improve those features (1989) fits in

well with the community college mission if we accept Juran's definitions of a product as the output of any process, product features as those intended to meet customer needs, and deficiencies as product failures resulting in customer dissatisfaction.

The implications for a community college are consistent with what has always been the essence of the community college mission. At the turn of the century, David A. Sinclair of the Dayton, Ohio, YMCA College identified that mission as "find the need and endeavor to meet it." What is often overlooked is the process of evaluating actual performance and comparing that performance to quality goals—as opposed to reliance upon randomly collected information about student and community needs.

Faculty and staff must be involved in making changes in response to identified needs if the college is to develop a climate for innovation. Recommendations should originate from those directly involved in the program and should not be implemented without their input. It is, therefore, essential that the faculty and staff for each service area annually review their statements of intended student outcomes (discussed at length in Chapter Five) and use them as quality goals with which to assess actual performance.

Faculty and staff should also annually review the information on community and student needs collected by the assessment office. Faculty and staff must also analyze the extent to which those needs are currently being met, collect evidence that the college is meeting those needs, formulate an enhancement plan to better meet those needs, and present their recommendations to the administration. The enhancement plan should become an integral aspect of the college budget process for the following year.

Individual Motivation

Juran (1989) emphasizes the importance of each individual within an organization becoming motivated to enhance both individual and group performance. In a collegiate environment where faculty and many professional staff function with a great deal of autonomy, it is even more imperative that individuals become personally involved in assessing and enhancing their own effectiveness.

Obtaining individual commitment to quality enhancement in a community college must include three interrelated dimensions. First, there must be an understanding of and commitment to the college's mission and its importance to society. Secondly, each person in the college, with the assistance and endorsement of the college leadership, must be able to assess his or her own effectiveness in a non-threatening environment and do something about what is learned (a subject that will be discussed more fully in the empowerment section to follow). Finally, a system of rewards for enhanced group effectiveness must be devised and followed so as to convey to individuals, whatever the extent of their

involvement, that innovation and change contribute to institutional effectiveness.

To enhance individual motivation for quality in a community college, the revised college mission statement should be reviewed and discussed on a regular basis by every work group, with a view toward understanding the contribution it is making to the college's effectiveness and society as a whole. In addition, the assessment office must be available for the assistance of faculty and professional staff in designing, implementing, and analyzing assessment projects of their individual and/or group effectiveness. In view of the likelihood that most enhancement efforts will include a staff development component, the staff development department must receive, on a long-term, continuous basis, the personnel and resources necessary to assist all requests for assessment data from faculty and staff. A close working relationship between the assessment office and staff development program is essential to institutional effectiveness.

The lack of discretionary monetary rewards in public institutions makes it necessary to develop other incentives for community college personnel. A joint task force of faculty and staff representatives should be formed to explore available reward options for individuals and groups within the college and recommend additional options consistent with existing collective bargaining agreements and available resources.

Removing Barriers

Deming's Fourteen Points for Management include the need to break down barriers between departments within an organization. Departmental orientation is seen by Deming (1986) as inevitably resulting in competitiveness between work areas whereby employees lose the organizationwide perspective that is so essential to quality enhancement. In a collegiate setting this phenomenon is magnified by the identification of faculty, and often support staff, with the academic disciplines that make up programs or departments. The focus, Deming suggests, must be on the quality of the overall product.

In a typical collegiate setting, departmental and discipline identification is also accompanied by an even wider perceived division—that of academic affairs, student services, and business services. Student and business services exist to make effective instruction possible, a role that requires cooperation and teamwork from all areas of the college. Effective student and business services are a key factor in assuring access and take on a more important role than in other segments of higher education.

In most community colleges a dichotomy exists between those organized into collective bargaining units and those in a leadership role. Collective bargaining units are, and continue to be, an effective means of assuring individual rights and equitable working conditions for all employees. Nevertheless, all college employees, regardless of function or

position, must consider themselves part of a team working together to assure institutional effectiveness. In doing so they must recognize that the welfare of the individual is irrevocably tied to organizational effectiveness: in these times no organization that is ineffective is likely to survive. Much of the dramatic change in American business and industry in recent years is linked directly to acceptance on the part of unions and management of the necessity for working together. The continued success of community colleges in fulfilling their unique mission will require a partnership with collective bargaining units that reflects a "we" rather than a "them and us" perspective.

To remove these organizational barriers, work groups within the college should be reorganized to include multidisciplinary and multifunctional teams, with each group made accountable for all facets of a student's experience. The goals of each work group should be defined in terms of the college's mission statement, with specific objectives related to the group's discipline and function. The assessment of work-group effectiveness must, therefore, focus primarily upon its effectiveness in fulfilling the college's mission.

Successful companies in today's economic climate have, almost without exception, succeeded in fostering a sense of common purpose between organized labor and the company. The leadership of existing collective bargaining units and a community college attempting to implement CQA may enhance a harmonious working relationship through discussions with labor and management from local businesses that have successfully implemented TQM. The college, in turn, may be able to reciprocate by providing training programs for these companies.

Empowerment

Deming (1986) and Drucker (1973) agree that empowering workers is the cornerstone of TQM. In Deming's view, supervisors must no longer tell their subordinates what to do, but rather what is to be done and how it will be determined that it has been accomplished. Both writers agree that empowerment of workers strengthens rather than weakens management authority.

Taken as a whole, Deming's Fourteen Points for Management (Chapter Two, pages 13-14) constitute a useful outline for achieving empowerment in a community college. Especially applicable are the following points: drive out the fear of making errors, eliminate exhortations and targets for productivity levels, and institute a vigorous program of self-education and self-improvement. Deming also points out that managers must be leaders rather than supervisors. At the same time, each group must be accountable for doing the best possible job of achieving agreed-upon outcomes. Without accountability there can be no empowerment, and without valid assessment there can be no accountability—each is inextricably linked to the other. In any organization, including a

community college, empowerment must be implemented from the top down. It begins with the president delegating to each member the cabinet the authority to fulfill his or her responsibilities. Such delegation of authority should be in terms of clearly defined outcomes that have been mutually developed.

Empowerment is a strategy for achieving enhanced effectiveness by allowing an individual or work group to determine how an outcome will be achieved. Inherent in this delegation of authority is a mutual understanding of the desired outcomes, the extent of the empowerment, and the constraints of existing contracts and policies. Those who are delegated authority as well as those who delegate it must also understand that empowerment is a responsibility founded upon accountability; that those who are empowered will use influence rather than authority to achieve goals; and that outcome statements may take any of a number of forms, including mission statements, defined goals, position descriptions, and promulgated policies.

Systematic Assessment

Ewell emphasizes the necessity for systematic assessment to form the basis for accountability and credibility (1990). Astin states "that any educational assessment project is incomplete unless it includes data on student inputs, student outcomes, and the educational environment to which the student is exposed" (1991, p. 18). Astin goes on to point out that "simply having input and outcome data of a group of students over a period of time is of limited value if you do not know what forces were acting on these students during the same period of time" (1991, p. 20). Systematic assessment must, therefore, draw upon a data base that includes all three of these variables.

Credibility for community colleges is a matter of validating the extent to which the programs of the college do what they purport to do in terms of defined student outcomes. Increasing credibility requires that performance standards are continually redefined to encompass student and community needs for each degree and certificate program, that graduate performance is validated through reliable measurement techniques, and that these facts are communicated to potential students, employers, funding sources, and the community at large.

Funding is now an overriding concern for all of higher education. Public colleges and universities in most states have already increased student fees beyond a level consistent with open access. State and federal support for public and private higher education cannot be expected ever again to match the pre-recession level of the 1980s. All funding sources, public and private, are increasingly viewing any type of support as an investment. The message is clear: to maintain or expand the base of its resources, a community college must develop and communicate reliable data validating institutional effectiveness.

Most community colleges have attempted, with limited success, to create a "vision for the future" through various long-range planning strategies. One of the factors limiting success in those efforts has been the fragmented nature of the available data, because most colleges lack a valid data base. Planning for the future, regardless of the name given the process, requires a longitudinal, comprehensive analysis of the past and present. With this knowledge and broader information on student and community needs, the entire college may plan together to enhance existing programs and services as well as fulfill future needs.

Maintaining standards of student competence in an open-door institution has always been a challenge for community college faculty. In most community colleges, admission is open to all, but students must fulfill specific academic prerequisites for admission to individual courses and programs. Continuous assessment of student achievement in terms of defined learning outcomes is essential. Without such data, appropriate learning experiences cannot be identified, and adequate counseling and advising assuring equal opportunity cannot be provided. Faculty must also continuously assess the extent to which classroom techniques are effective. The assessment program must involve and be guided by faculty, and must measure the extent to which graduates are achieving stated programmatic outcomes. Faculty and staff together must make the changes indicated by the assessment data to assure that standards are met while equal educational opportunity is provided.

Reliable assessment data can help colleges define priorities and communicate them effectively. The difficulty that many colleges encounter is a lack of focus upon selected issues. A typical community college with diverse programs and services but limited resources is unable to reliably assess all aspects of the organization and, consequently, often fails to assess comprehensively any one facet of its operation. By focussing on and comprehensively assessing the most critical issues, the college will develop priorities that may be used to allocate resources and people in the most effective manner possible.

A systematic assessment process in a community college must be composed of a variety of initiatives originating with the faculty and staff. These initiatives should include, at a minimum, the tracking of the success of all graduates in achieving defined program outcomes on the job or after transfer to a baccalaureate institution, the effectiveness of all college functions and services in achieving defined outcomes, and the effectiveness of individuals and work groups throughout the college in achieving defined outcomes.

Team Building

J.M. Juran (1989) emphasizes the importance of motivating every individual in an organization to embrace quality enhancement. Among the ten benchmarks of the total quality imperative identified by

Feigenbaum is his statement that "quality requires both individual and teamwork zealotry" (1991, p. 828). Virtually all TQM theorists agree on the need for a team organization.

Community colleges should include both long-term, function-related teams and short-term, cross-functional teams. Function-related teams exist on a continuous basis within the traditional organizational structure of the college and include the president's cabinet, academic affairs, individual academic programs, the registrar's office, etc. They are overlapping work groups in which the leader of each is also a member of another more comprehensive team.

Cross-functional teams respond to a specific issue and have a definite life span determined by the issue. For each issue, a new cross-functional work group is formed to include all those affected. Progress updates and opportunities for input should be communicated regularly to the entire college community.

Empowerment from a TQM perspective is primarily a delegation of authority to a group rather than an individual. It is the group rather than any member of it that makes decisions and takes actions. In no instance should an individual represent himself or herself as acting for the group without specific direction from the group.

Chapter Five

Assessment and Planning for Continuous Quality Assurance

For a decade or longer, community colleges have recognized the importance of long-range planning in maintaining their mission as opportunity colleges. As their mission became more diverse during the evolution from junior to community colleges, it became apparent that the continuous change resulting from that evolution required systematic long-range planning if the colleges were to continue to be effective. A blueprint was needed to assure an edifice that would not collapse from its own weight.

During the 1980s almost every institution of higher education attempted to implement some type of planning model. Typically, the models adopted by community colleges came from business and industry—such as Management by Objectives—or from universities—usually identified as Strategic Planning. Neither approach has succeeded in most community colleges for the simple reason that many of the goals of private industry and universities are inconsistent with those of community colleges.

A realistic analysis of Management by Objectives reveals that the process has as its basic goal the molding of employees to conform to management objectives. The widespread adoption of worker empowerment as a key aspect of TQM reflects the realization that management through power and authority, under any guise, seldom results in a quality product. Such a management style has always been incompatible

with a collegiate environment where participation in governance is traditional. To the extent that community colleges embraced MBO and similar management control models, they were at odds with their identity as collegiate institutions. That basic incompatibility made MBO largely ineffective as a planning model in community colleges, although it did, in many cases, improve communication and achieve a consistency of purpose.

Most strategic planning models for four-year colleges and universities are based on a proliferation of degree programs and, consequently, focus primarily on determining which programs should be reduced or eliminated. Although many such models also focus on management and campus life, those areas were also evaluated primarily in terms of efficiency rather than effectiveness. For community colleges, program diversity is a necessity rather than a liability. The focus of planning in community colleges should be on the extent to which the college is effective in meeting all of the educational needs of its communities. Community college goals are, therefore, more consistent with TQM than with those of conventional strategic planning models.

The assessment movement of the early 1990s is, however, much more in concert with the changing environment of community colleges than previous planning models. Because traditional higher education strategic planning models rely upon the collection of relevant data on an "as needed" basis, the data collected is dependent on current internal perceptions. Such data is seldom adequate for effective planning in a community college. On the other hand, systematic assessment will, over a period of years, generate a data bank of information that is not only accessible, but meets acceptable research standards and thus provides a solid basis for long-range planning of the type required to maintain diversity and effectiveness in a community college.

Many institutional assessment projects lack a linkage of assessment to decision making and thus to actions leading to enhanced effectiveness. The process of identifying an issue and making the appropriate decision, based on reliable data, is true strategic planning. Although TQM has many components, their common theme is reliable data as the basis for decision making.

The Data Base

For assessment and planning to become the basis for CQA, each college must put several mechanisms into place. The most critical of these is a comprehensive student/alumni data base. Typically, a college stores student-related data in a myriad of places on campus and in a variety of formats, both manual and computerized. The registrar maintains the basic student data base, containing registration, grades, and degree facts about each student. In addition, admissions, counseling, the business office, the assessment office, each academic department,

and many other work areas routinely collect and store student-related information. Comprehensive assessment requires cross-analysis of all of this information. Colleges need a single data base that includes all available information regarding each student and former student, maintained in a comprehensive software format.

In most colleges, the largest single source of student data is found in the registrar's office. Therefore, the simplest means of achieving a single comprehensive student data base is expansion of this existing student record system. The challenge is one of expanding the software format and hardware capacity of the system to accommodate an almost infinite amount of additional information about each student and former student. Conceptually, it is useful to view this as an expansion of the student record system into a comprehensive Student Information and Tracking System or SITS.

All faculty and staff must have access to the SITS data base if they are to be involved in quality enhancement initiatives. However, colleges must also preserve the confidentiality of student information, which is required by federal regulations, by carefully developing a system to assure maintenance of confidentiality, restriction of the ability to enter or change data, and access only for those expected to use student information. Although no such system is foolproof, it is critical that every effort be made to assure that under ordinary circumstances it is completely reliable.

Rather than attempt to enter all accumulated student and alumni data into the system at one time, SITS should be developed on an as-needed basis. To avoid duplication of effort, the assessment office must have a complete inventory of student-related data available throughout the institution both in computerized and noncomputerized files. As the available data is needed, it may then be put into SITS. When a piece of data is made a component of SITS, the college should develop processes to systematically collect and input that information into the system in the future. It will then be easy to do follow-up projects, evaluative studies, and future data analysis.

Ideally, the data in the system could address all possible research questions posed. In more practical terms, kinds of data that will typically become a part of the system include demographic information, advising information, placement test scores, and adviser recommendations. After students begin their academic work at the college, not only their grades, but also their coursework, extracurricular activities, community involvement, work status, financial aid status, and advising and counseling recommendations should routinely be entered. Equally important is the tracking of performance following transfer or employment.

The most significant portion of SITS is the new data collected in assessment projects. Each assessment project will generate data that may be utilized for other types of analysis. Over a period of years, accumulated comparative longitudinal data will make analysis even

more valid. For example, a five-year history of success on the job will be an irrefutable validation of a career program's effectiveness that can be used not only for program improvement, but for accreditation, fund raising, recruitment, and placement.

Assessment Services

External forces demanding accountability have spurred most colleges and universities to develop some type of assessment. In many instances colleges have simply renamed the office of institutional research or re-established the institutional research component of the administrative organization. A few institutions have developed an assessment office that attempts to provide the data base required for accreditation, funding, and public accountability.

To achieve an institutionwide philosophy of linking assessment and planning for the purpose of decision making, assessment must be viewed by everyone in the organization as a service rather than a management tool. The assessment office must be a place where anyone in the college can go for assistance in developing a research plan, collecting reliable data, and making a statistically valid analysis of the data. Above all it must not be viewed as an evaluative arm of management.

The director of assessment is key to the entire CQA process and as such must have a high degree of credibility. Too often this critical function is assumed by highly committed and well-meaning faculty or staff members who have little statistical or research expertise. Deming (1986) was especially forceful in advocating the importance of placing quality assessment in the hands of people with credentials in statistical analysis and research methodology.

If change is to be effected, faculty and staff must take the initiative to use the resources of the assessment office. The assessment office director and staff should communicate their willingness to help design, conduct, and analyze assessment projects by individuals, committees, programs, and work groups. To fulfill such a role, they must be able to provide whatever confidentiality is desired by those seeking assistance. In addition, the president and board of trustees must provide the resources, especially staff, required by a growing commitment to assessment and planning.

Alumni Follow-Up

The systematic tracking of students after they leave college is essential to assessment. The use of student outcomes as the basis for program assessment requires continual contact with former students, particularly graduates, and their employers, their communities, and the schools to which they transfer. Only through systematic collection of empirical data regarding performance in transfer institutions, on the

job, and in the community can the effectiveness of a student's experiences at the community college be determined.

Although the term "alumni" is often used to identify only the graduates of a college, it is important for assessment purposes that all former students be included in SITS. For such inclusion, alumni should be defined as all students who have attended the college, regardless of status, program, or progress. Access may be analyzed by following up on applicants who never actually attended.

A formidable barrier to student tracking is the mobility of community college graduates and other former students. Typically, researchers have little success in attempting to contact students after more than one year. However, the assessment of programmatic outcomes requires a high response to any survey of students. To help achieve such a response, the college can sign a contract with a credit company that maintains current addresses for collection purposes. Systematic efforts to maintain regular contact with students from the time they leave the college will make it possible to obtain an acceptable level of response to assessment surveys.

Program Outcomes

Reliable student performance assessment requires the careful identification of programmatic student outcomes and regular updates by faculty and staff. This is true for the college's nonacademic programs and services as well as degree and certificate programs.

Specifying student outcomes in course and program descriptions is essential for both quality instruction and reliable assessment. Well-defined student outcomes help assess program effectiveness as well as student performance. Faculty and academic affairs staff will also be able to use course descriptions outcomes to develop statements of intended student learning outcomes for the college's degree and certificate programs.

Statements of intended student outcomes are descriptions of what program faculty and administrative staff expect graduates to know (cognitive), or do (behavioral). These statements should be:

- Results oriented
- Clear and understandable to students and lay persons
- Directed at the substance rather than the means of achievement
- Limited to the outcomes that are currently actively pursued by the faculty
- Ascertainable
- Consistent with minimum standards for admission to the program

Concurrently, each nonacademic segment of the college should begin identifying its intended program outcomes. The guidelines for develop-

ing those outcomes are the same as those for academic programs described above. The college should also use a similar approval process. The president and appropriate dean or vice president should meet with the professional staff of each nonacademic work area to develop comprehensive student outcomes statements and submit proposals to the board of trustees for its reaction and ultimate approval.

The faculty and staff should then develop a research plan that translates desired outcomes into measurable research questions. To assure validity, the assessment office should be involved in developing the plan. The research plan should be continually modified on the basis of data that is systematically collected at regular intervals. The cumulative data will promote quality assurance and validate programmatic effectiveness.

The Issue Approach

In recent years business and industry have widely used what is called "the issue approach" to planning and development. In this approach an organization identifies a limited number of its most critical problems in order to assess them and take appropriate action. Unlike most planning models, this allows the organization to prioritize its planning and development efforts not only to deal with the most important and urgent items first, but also to take into consideration available human and fiscal resources. One of the benefits of this approach is the potential for immediate success on a few issues as opposed to limited success on a variety of issues.

Reliance upon incomplete or intuitive data almost always results in the relative ineffectiveness of organizational or individual performance. The issue approach requires that those involved agree that a need exists and be willing to look at the facts analytically. Thus, the issue approach provides an outcomes-related research plan, systematic data collection, statistically valid data analysis, and—most importantly—the use of that data analysis for planned change.

Such an approach can be equally effective at the individual, institutional, and program levels. Faculty and staff who understand CQA will accept the importance of assessment as the basis for enhancing their own effectiveness. The most promising implication for TQM in community colleges is the potential for faculty and staff to accept the fact that change is not only possible, but necessary.

If each issue-related assessment project continues for as many years as are necessary to assure that it is no longer a critical issue, the college will not only achieve the original purpose of quality enhancement, but will collect valuable data on other issues. This is true for individual faculty and staff assessment projects as well as broader institutional and program projects.

In addition, the data will inevitably raise additional issues that might not have been recognized without the related research and

analysis. The involvement of individuals inside and outside the college in the analysis of a specific issue will also result in thoughtful interaction among faculty, staff, students, and the community, which will in turn help empower and involve workers, maintain a consistent college purpose, motivate individuals, and remove barriers to cooperation.

Relationship to Staff Development

The assessment office will provide better service if the director and staff have a close working relationship with the staff development office. Analysis of most assessment data will indicate the need for personnel development of some kind. A strong staff development office is, therefore, also an essential component of CQA.

Like assessment, staff development must be viewed as a service to the entire college. Staff development personnel must have unquestioned credibility as community college educators and academicians. Consequently, successful staff development administrators will most often come from the faculty and be respected teachers first. A successful teacher can acquire the technical aspects of curriculum development and instructional methodology, but there is no substitute for classroom experience. After credibility, the most important qualification for staff development personnel is the ability to communicate. If personnel are selected based on these two criteria alone, the program has a high potential for success.

Collegewide Involvement

The final ingredient in CQA is collegewide acceptance of the concept. Continuous quality assurance is a philosophy as much as a process. Although the commitment and direct involvement of the president, trustees, and senior management staff are essential, the development of a collegewide quality focus requires the opportunity for every individual associated with the college to become involved. Therefore, a Quality Council that represents everyone in the college should coordinate quality enhancement.

To assure collegewide involvement and ownership of the CQA process, the Quality Council should include representatives of the college governance organization, the student governance organization, each collective bargaining unit, the president's cabinet, the board of trustees, the community at large, the director of assessment, and the president as chairperson.

The Quality Council advises the president on quality initiatives, reflecting the perspectives of the segments of the college community it represents; assists in the coordination and acceptance of those initiatives; evaluates the overall process; regularly updates the strategic plan for continuous quality assurance; and communicates those activities to the college community.

Chapter Six

Implications of a Quality Focus

Viewed cumulatively, a number of unanticipated benefits emerge from CQA. The issue approach to problem solving and decision making has the potential to address many of the issues that confront faculty and staff. The results are almost always positive when the college focuses on quality and uses assessment as the basis for a solution. In many such instances, quality has provided an acceptable and readily understood focus that tends to pull those involved together to plan a desirable course of action.

CQA may go beyond providing the evidence of institutional effectiveness required by funding sources. It may also provide a mechanism for the preparation of new funding proposals. Funding sources—whether they be state, federal, or private—always want to see the relationship of the proposed program to quality enhancement. A mutual understanding of CQA provides a common point of reference for faculty and staff engaged in the conceptual development. Such a commonality is especially effective in relating the relationship of a proposed initiative to the college's mission.

Systematically collected data also helps colleges identify institutionwide and program-specific budget priorities. CQA provides a continuous year-round vehicle to involve faculty and staff in identifying and setting priorities. When concerned faculty and staff are involved in setting priorities through a mutually understood process, the final budget decisions are much more likely to be accepted by everyone.

Collegial governance may also be more effective when those issues of concern are approached from an assessment and planning perspective. Too often governance decisions are made without full knowledge of the facts involved, but if the governance body of a college defines its outcomes, determines the extent to which it is achieving those outcomes, and bases decisions upon empirical data, the governing board itself will prove more effective.

Unquestionably, the most promising implication of the CQA model for a community college is the potential for enhanced instructional

effectiveness through both curriculum development and instructional innovation. Once faculty and staff accept the need for systematic and continuous change to keep pace with the external forces at work in a global society, they will find that CQA provides a model for understanding and adapting to those external forces. The individual instructor or academic program work group that defines outcomes, assesses effectiveness, and takes appropriate actions to strengthen a course program will have achieved effectiveness at its most basic level.

Equally promising in terms of its implications for enhanced institutional effectiveness is an extension of the CQA model beyond academic affairs and into the support services of the college. When professional and classified staff in work groups in student services, business and fiscal services, and other nonacademic offices accept the need for continuous assessment and planning for improvement, they too will become more effective. To accomplish such an understanding and awareness, staff at all levels of the organization must be included in the CQA process.

Among the other long-term implications of CQA is the potential for overcoming existing constraints upon quality and effectiveness. Funding from all sources may increase once the college is able to consistently validate its effectiveness. Limitations in collective bargaining agreements can be renegotiated more readily if hard data are available. Counterproductive state and federal regulations might be revised when factual data provide a rationale for change.

An equally important long-term implication of a quality focus in a community college is the potential effect upon campus climate. An improved campus climate could result if colleges implement Juran's concept of Leadership for Quality, which emphasizes techniques for overcoming differences in viewpoint among work-group members (1989). When people who are affected by a college's basic assumptions have been involved in developing them, campus climate is certain to improve. Institutionwide acceptance and practice of concepts such as teamwork and empowerment always enhance interpersonal relationships throughout an organization.

Each of these implications will contribute to effectiveness at some level of an institution. The cumulative effect will most certainly be the ultimate goal of CQA—enhanced institutional effectiveness.

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